

Grant County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

10/3/14

12 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Grant County economy.¹

These 12 sectors have a total direct output of approximately \$428 million and support 674.9 jobs in Grant County. Running the model for all 12 sectors simultaneously produces the following results:

Agriculture Contribution in Grant Co						
Impact Type ²	Employment	% Employment	Total Value Added ³	% of Gross Regional Product ⁴	Output ⁵	% of Gross Regional Product
Direct Effect	674.9	13%	83,646,443.1	18%	428,169,958.2	91%
Indirect Effect	279.5	5%	33,811,019.0	7%	51,988,338.8	11%
Induced Effect	222.5	4%	17,355,167.8	4%	27,527,214.9	6%
Total Effect	1,176.9	22%	134,812,629.9	29%	507,685,511.9	108%

As shown in the above table, agriculture, food, and food processing supports 1,176.9 jobs, or 22% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$508 million, roughly 108% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 12 agriculture, food, and food processing sectors is approximately \$135 million, or 29% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 29% of the total economy.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:

http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value added = labor income + indirect business taxes + other property type income.

⁴ GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

⁵ Output = intermediate inputs + value added.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

In the top ten by employment, Cattle ranching and farming is the top employer in the agriculture industry with 304.7 employees. This table also shows the amount of jobs that are created by the agriculture industry in Grant County.

Description	Total Employment	Total Output
Cattle ranching and farming	304.7	324,819,938.7
Grain farming	207.6	82,161,338.6
Support activities for agriculture and forestry	142.4	3,751,658.7
Real estate establishments	92.2	11,965,657.3
Monetary authorities and depository credit intermediation activities	56.3	18,721,666.2
Wholesale trade businesses	49.4	9,892,084.7
Food services and drinking places	47.1	2,499,208.8
Transport by truck	28.3	4,040,782.8
Private hospitals	20.5	2,753,531.0
Civic, social, professional, and similar organizations	14.6	574,270.4

The Cattle ranching and farming industry directly contributes approximately \$325 million to Grant County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

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Cattle ranching and farming	304.7	324,819,938.7
Grain farming	207.6	82,161,338.6
Monetary authorities and depository credit intermediation activities	56.3	18,721,666.2
Real estate establishments	92.2	11,965,657.3
Wholesale trade businesses	49.4	9,892,084.7
Electric power generation, transmission, and distribution	8.3	5,821,464.6
Imputed rental activity for owner-occupied dwellings	0.0	5,646,541.8
All other crop farming	2.0	5,023,995.1
Dairy cattle and milk production	3.2	4,443,245.7
Transport by truck	28.3	4,040,782.8

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Grant County's economy.

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All 105 counties in Kansas have Implan models and agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.